

of origin, by plant pests that may not, in the judgment of the Administrator of the Animal and Plant Health Inspection Service, be destroyed by freezing.

(e) Freezing of fruits and vegetables as authorized in this section is considered necessary for the elimination of pest risk, and no liability shall attach to the United States Department of Agriculture or to any officer or representative of that Department in the event of injury resulting to fruits or vegetables offered for movement in accordance with the instructions of this section.

[24 FR 10777, Dec. 29, 1959, as amended at 55 FR 38979, Sept. 24, 1990]

§318.13-4b Administrative instructions prescribing methods of vapor-heat treatment of certain fruits and vegetables from Hawaii.

(a) *Approved vapor-heat methods of treatment.* (1) Approved vapor-heat treatment, in accordance with the following procedure, is hereby designated as an administratively approved procedure that meets the requirements for the certification, in accordance with §318.13-4(b), of papayas, bell peppers, eggplants, pineapples (other than smooth Cayenne), Italian squash, and tomatoes for movement from Hawaii:

(i) In the approved vapor-heat treatment the fruits and vegetables are heated by saturated vapor at 110° F. which in condensing on the fruits and vegetables gives up its latent heat. This latent heat is essential in assuring mortality of eggs and larvae of the oriental fruit fly, the Mediterranean fruit fly and the melon fly, and in raising the temperature of the fruits and vegetables evenly and quickly so as to prevent damage to the treated products. In applying the treatment the saturated vapor is accompanied by a fine water mist and air admixture.

(ii) The fruits and vegetables are cooled immediately after treatment and no wax or paraffin, either dry or in solution, may be used until after the treatment has been completed. Vapor-heat treatments are approved only if the vapor conditions within the heat treating room, the manner of stacking the boxes containing the fruits and vegetables in the room, and all other conditions affecting the efficacy of the

treatment are satisfactory to the supervising inspector, to assure mortality of eggs and larvae of the oriental fruit fly, the Mediterranean fruit fly, and the melon fly.

(iii) In applying this treatment, in accordance with these principles, the temperature of the fruits and vegetables shall be raised to 110° F., at the approximate center of the fruits and vegetables, within a period designated by the inspector, and shall be held at that level during the following 8¾ hours.

(2) Approved vapor-heat treatment, in accordance with the following procedure, is hereby designated as an alternate administratively approved procedure that meets the requirements for the certification, in accordance with §318.13-4(b), of papayas for movement from Hawaii:

(i) In the approved vapor-heat "quick run-up" treatment the papayas are heated by saturated vapor until the temperature at the approximate center of the fruit reaches a minimum of 117° F. The cooling and other conditions prescribed in paragraph (a)(1)(ii) of this section apply.

(ii) The conditioning of the papayas preparatory to the treatment, as provided in paragraph (e) of this section, shall be completed within a period designated by the inspector.

(3) The treatments provided for in paragraphs (a) (1) and (2) of this section must be conducted in a heat-treating room approved by the Animal and Plant Health Inspection Service and must be conducted under the supervision of an inspector of that Animal and Plant Health Inspection Service, who at all times shall have access to the fruits and vegetables while they are undergoing treatment.

(4) The Animal and Plant Health Inspection Service will approve only those rooms which are properly constructed and adequately equipped to handle and treat the fruit or vegetables, at locations acceptable to the inspector in areas where required supervision can be furnished. Hereafter no treating plant will be approved until it is equipped with a self-recording temperature and humidity indicator acceptable to the inspector.

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(b) *Subsequent handling.* All handling in Hawaii subsequent to treatment of fruits and vegetables intended for shipment elsewhere in the United States must be carried out to meet requirements of and under the supervision of the inspector.

(c) *Costs.* All costs of treatment and prescribed post-treatment safeguards, other than the services of the supervising inspector during regularly assigned hours of duty and at the usual place of duty, shall, as required by § 318.13-4(b), be borne by the owner of the fruits or vegetables, or his representative.

(d) *Department not responsible for damage.* In the tests and experiments so far conducted, fruits and vegetables (other than eggplants) have not been injured and the results following treatment have been successful. It is however, emphasized that inexactness and carelessness in using the approved method of treatment may result in injury to the fruit and vegetables treated. In approving this treatment the U.S. Department of Agriculture does not accept responsibility for fruit or vegetable injury.

(e) *Conditioning.* (1) The treatments set forth in paragraph (a) of this section are in addition to any other procedure or practice that may be found by the shipper to be desirable to condition or otherwise handle fruits or vegetables that may be offered for treatment.

(2) Eggplants require conditioning before they will tolerate the approved vapor-heat treatment. Even when conditioned, darkening of their seeds usually occurs. In tests of eggplant tolerance to vapor-heat treatment, 6 to 8 hours conditioning at 110° F. and approximately 40 percent relative humidity before the prescribed 8¾-hour holding period has been found effective. This conditioning procedure or any other that the shipper has developed and found satisfactory may be used for eggplants at the shipper's risk.

(3) Papayas require conditioning before they will tolerate the approved vapor-heat "quick run-up" treatment and even then some injury may result. Any conditioning that the shipper has developed and found satisfactory may

be used with the "quick run-up" treatment for papayas at the shipper's risk.

[24 FR 10777, Dec. 29, 1959. Redesignated at 50 FR 9788, Mar. 12, 1985, and further amended at 55 FR 38979, Sept. 24, 1990]

§ 318.13-4c Administrative instructions approving methyl bromide fumigation as a condition for certification of tomatoes for movement from Hawaii.

The Administrator of the Animal and Plant Health Inspection Service hereby approves methyl bromide fumigation, applied in accordance with the provisions of this section, as a treatment for tomatoes from Hawaii. Tomatoes treated and handled as provided in this section may be certified for movement from Hawaii to other parts of the United States.

(a) *Approved fumigation.* (1) The approved fumigation shall consist of fumigation with methyl bromide at normal atmospheric pressure, in a fumigation chamber which has been approved for that purpose by the Animal and Plant Health Inspection Service. The dosage shall be applied at the rate of 2 pounds per 1,000 cubic feet for 3½ hours at 70°F. or above.

(2) Tomatoes to be fumigated may be individually wrapped in gas-permeable tissue paper and packed in standard slatted tomato lugs or containers similarly vented. The fumigation chamber shall not be loaded to more than two-thirds of its capacity. The 3½-hour exposure period shall begin when all the fumigant has been introduced into the chamber and volatilized. Good circulation above and below the load, and between individual containers, shall be provided as soon as the tomatoes are loaded in the chamber and shall continue during the full period of fumigation and until the tomatoes have been removed to a well-ventilated location.

(b) *Supervision of treatments and subsequent handling.* The treatment approved in this section and the subsequent handling of the tomatoes so treated must be under the supervision of a plant quarantine inspector of the Animal and Plant Health Inspection Service. Such treated tomatoes must be safeguarded against reinfestation during the period prior to movement from Hawaii in a manner satisfactory